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ABSTRACT

Students often question the relevance of a variety of topics that they are asked to learn in school. Many teachers have decided to tackle this question with activities and lessons that help students relate their school work to their everyday lives and by helping students to form connections across disciplines. The project discussed in this document allows students to participate in a hands on activity (the construction of a replica of a town building) that integrates science, mathematics, and social studies. (ZWH)

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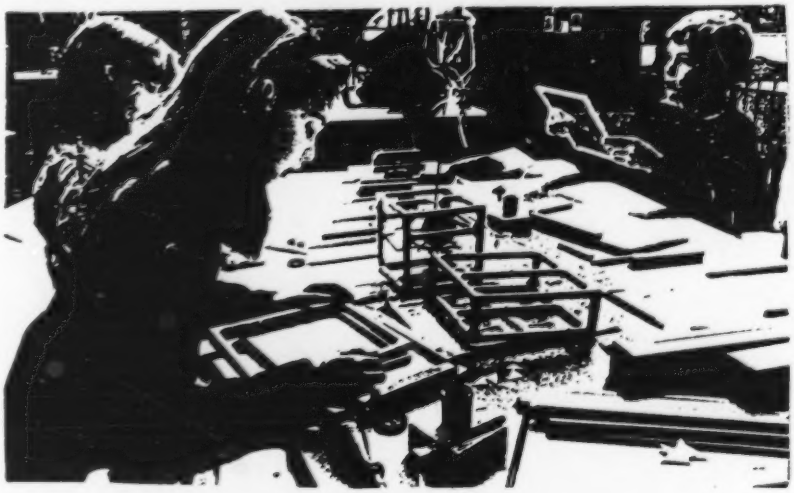
FROM LINX TO LINKS



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Project SEED

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General Description

Many children have difficulty understanding the relevance of science, social studies, and math in their lives. They also do not understand how these disciplines work together. Upon completion of this project the children will not only have experience with these subjects on an integrated level, but they will also have an actual structure (a replica of a town building) of their own to take home.
This project begins with a brief study of town history with special emphasis on particular key buildings in the area i.e. Grange Hall, mill, old school house etc. . After the study is completed, the class takes a field trip to either one or several buildings that they have studied. At the buildings the children are divided into groups of two, to measure the width and the length of the building. The older or more advanced student could do more in depth measuring and calculating. After everyone has finished the measuring portion of the project, they then draw a sketch of the inside and the outside of the building.

These statistics are then taken back to the classroom. As a class we discuss their data and average the specific measurements. This gives a common measurement for everyone to use. Since we can not duplicate the building with the exact measurements, the class reduces the figures to a workable size and with the teacher's help, creates an approximate scale i.e. one inch equals two feet.

There is one more optional step to take before the actual building starts. If possible invite a local carpenter to address the class on the fundamentals of building a structure. One of our visiting carpenters made a puzzle of building parts such as posts, beams, rafters, etc., so that everyone could have a chance to put the skeleton of a building together.

The next step is to draw a very simple blue print of the building on centimeter graph paper. This gives each student a picture to follow with the correct measurements as well as

modeling the proper building procedure.
Now the actual construction may begin! After spending a few minutes going over safety rules and operational procedures, the class is divided into groups of four. These groups work cooperatively sharing equipment, ideas, and solving problems while building their own individual buildings.

The finished product is a scaled replica of the building that the students visited. Each of the children should be able to produce a model by themselves by starting from the basic elements of construction. The excitement and the pride is overwhelming.

This is a class project in which everyone can participate. It will work for any size class of any age or ability. The complexity of the project can be adjusted to the characteristics of the group. I have found that learning disabled children have great success with this project. Also volunteers are not essential, but are very beneficial. The more people that are there to help, the more individual attention each student can receive.

Purpose/Goals/Objectives

There are several goals and objectives for this project:

- To show the relationship between the three subject areas of science, math and social studies.

- To show the importance of science, math, and social studies in our lives.

- To work cooperatively.

- To problem solve.

•To have a finished replica of the building or structure that was studied.

This project usually takes about a week- give or take a few days. The length of the project depends on how in depth the teacher wants to get. I usually plan most of the day during the time period to work on the project. However, this could also develop into an ongoing process to build upon all year. The procedures and instructions are in the general description of the project. The particular materials that are used and their procedures are described in the resource section.

Resources

The materials that are needed for this project are all included in the LINX kit. The only exception is the meter sticks that the children need to use when they measure the building. The LINX kit includes: centimeter graph paper, a sawing jig that children can use safely (with supervision), a drilling jig, 4 assembly boards, a dovetail saw, a hand drill, drill bit, mitre box, 75 wood sticks - 1cm x 1cm x 40cm, 40 wood sticks - 1cm x 0.4 cm x 40cm, 60 wood wheels -3 sizes, 30 wood dowels,120 cardboard wheels - 3 sizes, 400 cardboard triangles - 3 sizes, 75 plastic spacers, 3' plastic tubing, 4 oz. glue, 4 glue pots, and 4 rulers. The kit retails for $99, but will be sold to Project Seed Adapters at a discount.

Conclusion/Bibliography

I have worked on this project for three years, and every year I get more excited. This activity gets everyone in the classroom involved at the same time at their own level with great success. The students not only experience the relationship between subjects at school and everyday life, but they actually get a chance to use this knowledge and make something concrete to show for their efforts. FROM LINX TO LINKS is just a stepping stone to other areas of the curriculum that can be utilized in this manner. This is one of the most exciting and enthusiastically received projects that I have done in a classroom. I hope many new innovative projects will develop from this idea.